Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An oligonucleotide inhibitor chosen from an antisense oligonucleotide and/or a siRNA molecule, or an analogue thereof, comprising from about 7 to about 100 a nucleotides sequence complementary to a mammalian MBD2/demethylase mRNA as set forth in SEQ ID NO:10, wherein said oligonucleotide inhibitor, or analogue thereof, inhibits expression of a mammalian MBD2/demethylase gene.

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (previously presented) The oligonucleotide inhibitor according to claim 1, wherein said oligonucleotide inhibitor comprises one or more phosphorothioate backbone linkages.

7. (previously presented) The oligonucleotide inhibitor according to claim 1, wherein said oligonucleotide inhibitor comprises one or more 2'-O-methyl modified bases.

8. (previously presented) A vector comprising a sequence encoding the oligonucleotide inhibitor according to claim 1.

9. (currently amended) A host cell transformed or transfected with the oligonucleotide according to claim 1 ~~or the vector according to claim 8~~.

10. (currently amended) A pharmaceutical composition comprising the oligonucleotide inhibitor according to claim 1, ~~or the vector according to claim 8~~ in association with a pharmaceutically acceptable carrier for the manufacture of a medicament.

11. (canceled)

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (currently amended) A method for identifying target genes for cancer therapy comprising treating a cell with one or more oligonucleotide inhibitor ~~of a mammalian~~

~~MBD2/demethylase gene~~ according to claim 1, analyzing gene expression in the treated cell and comparing the gene expression with gene expression in a control cell not treated with said oligonucleotide inhibitor, wherein a difference in gene expression between the treated cell and the control cell is indicative of one or more target gene.

21. (previously presented) The method according to claim 20, wherein analyzing gene expression is conducted by microarray analysis.

22. (currently amended) A method for inhibiting expression of a mammalian MBD2/demethylase gene in a mammal comprising administering to said mammal a therapeutically effective amount of an oligonucleotide inhibitor chosen from an antisense oligonucleotide and/or a siRNA molecule, or an analogue thereof, comprising ~~from about 7 to about 100~~ a nucleotides sequence complementary to a mammalian MBD2/demethylase mRNA as set forth in SEQ ID NO:10, ~~to said mammal~~, wherein said oligonucleotide inhibitor ~~or analogue thereof~~ inhibits expression of a mammalian MBD2/demethylase gene.

23. (canceled)

24. (previously presented) The method according to claim 22, wherein said mammal is a human.

25. (currently amended) A method for treating ~~or preventing~~ cancer in a mammal comprising administering to said mammal a therapeutically effective amount of an oligonucleotide inhibitor chosen from an antisense oligonucleotide and/or a siRNA molecule, or an analogue thereof, comprising ~~from about 7 to about 100~~ a nucleotides sequence complementary to a mammalian MBD2/demethylase mRNA as set forth in SEQ ID NO:10, ~~to said mammal~~, wherein said oligonucleotide inhibitor ~~or analogue thereof~~ inhibits expression of a mammalian MBD2/demethylase gene.

26. (canceled)

27. (currently amended) The method according to claim 25, wherein said oligonucleotide inhibitor, or analogue thereof, inhibits cancer cell growth.

28. (currently amended) The method according to claim 25, wherein said oligonucleotide inhibitor, or analogue thereof, inhibits cancer cell proliferation.

29. (previously presented) The method according to claim 25, wherein said cancer is lung cancer or colorectal cancer.

30. (previously presented) The method according to claim 25, wherein said method is for preventing a familial cancer.

31. (previously presented) The method according to claim 25, wherein said mammal is a human.